

chestnut-brown or blackish with the usual stripes and grey tomentum; pubescence black, rather thick, with a bunch of white hairs above the base of wings; bristles black. *Scutellum* with white hairs on its anterior border and black and yellow bristles beyond, the latter predominating—the black bristles always on dorsum, not on border. *Abdomen* with the usual black spots; pubescence chiefly yellow, some black on the posterior segments; underside with whitish hairs, the border of the last segment does not appear to be produced, but is bordered by the very thick coarse black hairs forming a thick tuft on each side, coalescing in the middle. *Genitalia* extremely short and small, black and shining, with black pubescence; the upper forceps stout, the white hairs above are thick and extend to the apices of forceps. *Legs* dull brick-red, the femora with black stripes above, the legs with thick white pubescence and many white bristles on the tibiæ. *Wings* clear, with reddish-yellow veins.

Female identical. *Ovipositor* with some whitish pubescence, nearly as long as the last two segments together.

[To be continued.]

XXIV.—Some Notes on Babirusa.

By OLDFIELD THOMAS.

(Published by permission of the Trustees of the British Museum.)

THE British Museum owes to the generosity of Mr. Wilfred Frost a fine series of male skulls, eleven in number, of Babirusas collected by him in the island of Tali Aboe, in the Sula group, east of Celebes—a locality where they had been reported to exist, but from which, so far as I am aware, no specimens had been brought to any European Museum. In working these out and comparing them with the Babirusas of Buru and Celebes a certain number of interesting points have turned up, which may be worth publication.

Firstly, as regards the spelling of the names of the genus and type-species, these are quite correctly put by Lydekker* *Babirusa babyrussa*, none of the other variants of the two names being technically admissible. This being the case, it

* Cat. Ung. B. M. iv. p. 345 (1915).

is probably also more convenient to spell the vernacular name with a double *s*.

The typical species *Sus babyrussa*, Linn., was largely based on two figures of skulls, one by Grew and the other by Seba, so that the skulls depicted would have been co-types of the species. Of these two skulls, one—that figured by Seba—is still in existence (B.M. no. 67. 4. 12. 223), and may with propriety be formally selected as a lectotype. It was stated by Seba to have come from Buru, an assertion quite borne out by its characters.

The differences between the Buru and Celebes forms have been well pointed out by Deninger*, who shows how, by the more inward-pointing direction of the upper canines in the Babirusa of Celebes the nasals are pinched in mesially and other characteristics are produced by which that animal can generally be distinguished. The canines themselves are very much finer, and I may further note that well-marked basal pits appear always to be present in this species, while the bulke in section are of the narrow-oval shape found in the Tali Aboe skulls.

Deninger named the Celebean form *celebensis*, although stating that the description by Lesson of *B. alfurus* applied to that animal, and not to the Buru one. With some hesitation I am prepared to accept his view that none the less *alfurus* should be considered a synonym of *babyrussa*, on the ground that Lesson was distinctly giving a new specific name—as was necessary under the code of that day—to *Sus babyrussa*, whose specific name he was using as a generic one. Lesson's book contained descriptions of all mammals known to him, and the accident that his description of some Babirusas seen in Java is thought by Deninger to apply best to *celebensis* does not, I think, alter the fact that Lesson was distinctly renaming Linné's *Sus babyrussa*, of which, therefore, *alfurus* would be a synonym.

Now, with regard to the Tali Aboe Babirusas, I find that, so far as the canines and nasals are concerned, they are emphatically of the Buru or *B. babyrussa* type, without any tendency towards the characteristics of the Celebes *B. celebensis*.

But there are certain differences which, being found in so fine a series as eleven Tali Aboe skulls, as compared with the actual type of *B. babyrussa*, appear to indicate that they should be subspecifically separated from the latter. I would suggest for the animal, in honour of the naturalist to whom we owe its discovery, the name of

* Ber. Nat. Ges. Freiburg, xviii. p. 1 (1911).

Babirusa babyrussa frosti, subsp. n.

Size slightly smaller than in *babyrussa*. Upper canines as in the latter, not bent in, crossing each other or compressing the nasals, as is the case in *B. celebensis*. But they are conspicuously smaller and shorter than in *babyrussa*, and do not rise nearly so high above the muzzle as in that animal. Basial pits almost always absent, only occurring (and these shallow) in two out of eleven skulls. Bullæ small, narrow, flattened from side to side, their breadth much less than their horizontal diameter, in marked contrast to the broad sub-triangular bullæ of typical *babyrussa*; the crest leading upwards from their outer corners behind the glenoid fossæ well developed, much higher than that on the outer side of the base of the paroccipital process, this proportion being reversed in *babyrussa*. Paroccipital process more slender.

Dimensions of the type-skull:—

Length, nasal tip to occiput, 274 mm.; condylo-basal length 268; zygomatic breadth 124; nasals, length 131, anterior breadth 22, mesial breadth 15, posterior breadth 31; occipital breadth 73; palatal length 178; bullæ, horizontal length 25, breadth 13.

Length of canine along front curve 141, greatest length above nasals 45; greatest basal diameter 13. Front of p^2 to back of m^3 68; m^3 , length 22, breadth 15. Length of lower canine 77. Length of lower tooth-row 74.

The older skulls may attain to 284 mm. in condylo-basal length.

Hab. Tali Aboe Island, east of Celebes.

Type. Adult (but not old) male skull. B.M. no. 19.11.23.1. Presented to the National Collection by Wilfred Frost, Esq. Eleven skulls examined.

In the above various points there is such a strong average difference between the Babirusa of Buru and the form found in Tali Aboe that I think the latter should certainly bear a varietal name, even though some of the points may prove to be rather "average" than absolute characteristics.

Six of the skulls (including the type) were obtained by Mr. Frost on the comparatively high middle third of Tali Aboe, while the other five came from the lowlands of the eastern third. The latter skulls—of which three at least are fully adult—are rather smaller than the former, but the difference does not amount to much, and is, perhaps, due to a shortage of the food available in competition with the native pigs of the lowlands.

Of the external characters of *B. b. frosti* I am able to say nothing.

It will thus be seen that the Museum is indebted to Mr. Frost for a donation of very great scientific value, as series of such skulls are very rarely obtained, and this one represents both a verification of the Tali Aboe locality and the discovery of a new subspecies.

With regard to references that have been made to "domesticated or semi-domesticated" Babirussas, Mr. Frost states that, at least in Buru and Tali Aboe, these animals are never domesticated, as they will not live in harmony with the native pigs, which are ubiquitous.

He also says that the reason it is so difficult to obtain females is that the boars put up such a plucky fight against the dogs used in hunting that it is impossible to get at the sows until such time as the male has been killed, thus enabling the females to get safely away. As a result, very few museums possess female specimens, and our own collection only contains one single immature skull of that sex.

XXV.—*A Further Collection of Mammals from Jujuy.*
By OLDFIELD THOMAS.

(Published by permission of the Trustees of the British Museum.)

DURING the winter of 1919—April to August—Sr. E. Budin made collections of mammals on the lower grounds of Jujuy, firstly in the near neighbourhood of the town of Jujuy, at an altitude of rather more than 1200 metres, and then on the still lower levels to the east, where the Rio Lavallen, lower down (northwards) called the Rio San Francisco, forms part of the upper waters of the Vermejo system. On this river the place where Sr. Budin collected was Villa Carolina, some 20 kilometres to the east of San Pedro de Jujuy, and therefore in the same faunal district as Manoel Elordi and Tartagal, where he had previously found such interesting things.

A few additional specimens were obtained at Yuto, about 70 km. north of Villa Carolina.

The present collection adds considerably to our knowledge of the Jujuy fauna, and contains examples of four new forms, of which the most noticeable is a *Marmosa* of a more northern type than any previously recorded from Argentina.